



United States Department of Agriculture
Natural Resources Conservation Service

Conservation Cover

Wildflower Meadow for Wildlife and Pollinators

Virginia Conservation Practice VA Job Sheet

327(a)



Definition

Establishing and maintaining a predominance of native wildflowers to create wildlife habitat.

Purpose

This job sheet is provided as a component of a resource conservation plan. This practice may be applied to land taken out of agricultural production and dedicated to wildlife and pollinators.

Conditions where practice applies

This practice applies on lands to be converted from agricultural production requiring permanent protective cover. This practice does not apply to plantings for forage production or to critical area plantings. This practice is not to be used as part of a planned rotation or grazing system.

General Criteria and Specifications

Planting

Grasses, forbs and legumes shall be planted in mixes to promote diversity. A minimum of 2 grasses and 9 flowering forbs shall be planted. The maximum seeding rate for all species will not exceed 15 lbs/acre.

The species selected shall be chosen from the approved list in Table 1 (*OR from the Virginia Plant Establishment Guide version 2007 when approved*) of this job sheet. Select at least one species from each part of the growing season – early (April – June), middle (June – August), and late (August – September). This will provide habitat for insects and color for the entire growing season.

Seeding

Hand seed, broadcast, hydroseed, or drill seed.

Competition Control Before Planting

Conventional seedbed preparation, herbicide application or both may be used to control competition prior to planting.

Several steps are required to get successful undesirable competition control when using herbicide especially on fescue stands. The first step in killing fescue is to mow the area in late summer for a fall herbicide burn down. If possible after mowing and prior to herbicide application, remove the cut vegetation by prescribed burn to provide a better seed bed and allow for better herbicide contact with vegetation.

If needed, a second herbicide application should be planned. This application should occur after the remaining vegetation has re-grown to a 4 – 6 inch height. All herbicide applications shall be made when vegetation is actively growing. Table 2 provides herbicide treatment options.

A second herbicide application is required for dense fescue or orchard grass stands and other areas where competition may not be controlled by one herbicide application.

Other Considerations

Consider rotating management and maintenance activities throughout the managed areas to maximize spatial and temporal diversity.

Maintenance practices must be adequate to control noxious and invasive species.

Operation and Maintenance

Monitoring and controlling weeds is very critical in the first and second years. Prescribed burning (338) about every three years, in early spring, can prevent shrub invasion.

First Year

Observation of the growth of weed competition is essential. When undesirable vegetation reaches 12"-18" tall, mow to no less than 6" high to prevent weeds from going to seed. Most native plants will grow deeper root systems than tops in the first year, and mowing 6-8" high will not hurt them.

Second Year

Mow once, close to the ground, in early spring. Postponing mowing until early spring provides winter cover for wildlife.

Wildflowers may also be mowed for rebloom in summer when drought/heat stress causes significant loss of color. This shall be done when seeds have matured at a minimum of 3 weeks following bloom. Mowing high (four to six inches) and light fertilization will initiate rebloom of several species in three to four weeks.

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Specifications

Site-specific requirements are listed on the specifications sheet. Additional provisions may be contained in the conservation plan or other acceptable form of documentation. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See Conservation Practice Standard *Conservation Cover (327)*.

Client:	Farm #:
Field(s):	Tract #:
Planned By:	Location:
Date:	Length of Fence:
Landowner Objectives:	

Field Number	Species Selected (Min. 2 grasses/9 Forbs)	Seeding Date	Management	Date

Site preparation requirements _____

Installation shall be in accordance with the specified drawings, specifications, and special requirements. **No changes are to be made in the drawings or specifications without prior approval from the technical specialist developing the plan.**

Sketch of Layout



Table 1. Selected list of Herbaceous cover species

Species	Seeding Rate (% of mix; # seeds/lb) ^a	Max. Height (feet)	Bloom Period	Region ^b	Minimum Light	Flower (seed) Color	Min. Soil Moisture Requirements
Grasses (minimum of 2 species)							
Little bluestem (<i>Schizachyrium scoparium</i>)	10-30% mix; 200K/lb	2-3'	July – Oct	M, P, C	Full – Part Sun	Purple	Low
Big bluestem (<i>Andropogon gerardii</i>)	5-10% mix; 144K /lb	5-7'	Aug – Oct	M, P, C	Full – Part Sun	Yellow	Low to Moderate
Indiangrass (<i>Sorghastrum nutans</i>)	10-30% mix; 175K/lb	6'	Aug – Oct	M, P, C	Full – Part Sun	Red-yellow	Low to Moderate
Eastern gamagrass (<i>Tripsacum dacyloides</i>)	10-40% mix; 7K/lb	8'	June	M, P, C	Full – Part Sun	Straw	Moderate to High
Broomsedge (<i>Andropogon virginicus</i>)	5-25% mix; 800K/lb	1.5-3'	Aug – Oct	M, P, C	Full – Part Sun	Straw	Low to High
Switchgrass (<i>Panicum virgatum</i>)	10-20% mix; 250K/lb	4-6'	July – Sept	M, P, C	Full – Part Sun	Straw	Low to High
Coastal Panicgrass (<i>Panicum amarum amarulum</i>)	5-25% mix; 325L/lb	3-6'	Sept	C	Full Sun	Straw	Low
Sideoats Grama (<i>Bouteloua curtipendula</i>)	5-25% mix; 159K/lb	2'	July – Sept	M	Full sun	Straw	Low
Wildflowers (minimum of 9 species)							
Appalachian Beard Tongue (<i>Penstemon laevigatus</i>)	1-5% mix	4'	May – June	M, P, C	Shade to Full Sun	violet	Moderate
Black-eyed Susan (<i>Rudbeckia hirta</i>)	2-10% mix; 1.5M/lb	1-3'	June – Oct	M, P, C	Full – Part Sun	Yellow	Low to Moderate
Bee Balm (<i>Monarda didyma</i>)	1-5%	2-4'	June – Aug	M	Full Sun	Scarlet	Moderate
Black Cohosh (<i>Cimicifuga racemosa</i>)	1-5% mix	3-8'	June – August	M, P, C	Full – Part Shade		Moderate
Blazing Star (<i>Liatis spicata</i>)	2-10% mix; 100K/lb	1-5'	July – Sept	M	Full – Part Sun	Pink-purple	Moderate
Blue Vervain (<i>Verbena hastate</i>)	2-10% mix; 1.5M/lb	2-5'	June – Oct	M, P	Full – Part Sun	Violet	Moderate to High
Boneset (<i>Eupatorium perfoliatum</i>)	2-10% mix; 2.8M/lb	5'	July – Oct	M, P, C	Full – Part Sun	White	Moderate to High
Butterflyweed (<i>Asclepias tuberosa</i>)	3-15% mix; 70K/lb	1-3'	June – Aug	M, P, C	Full Sun	Orange	Low
Cardinal Flower (<i>Lobelia cardinalis</i>)	1-5% mix; 11.3M/lb	2-6'	July – Oct	M, P, C	Full – Part Sun	Red	High
Eastern Rosemallow (<i>Hibiscus moscheutos</i>)	1-5% mix; 200K/lb	6'	June – Sept	M, P, C	Full Sun	White	High
Fall Phlox (<i>Phlox paniculata</i>)	1-5% mix	1.5-6'	July – Oct	M, P, C	Full – Part Sun	Pink-Purple	Moderate
Great Blue Lobelia (<i>Lobelia siphilitica</i>)	1-2% mix; 7.7M/lb	1-5'	Aug – Sept	M, P, C	Full – Part Shade	Blue	High
Heart-lvd Aster (<i>Aster cordifolius</i>)	2-10% mix; 2M/lb	2-3'	Aug – Sept	M, P, C	Full – Part Sun	Blue-purple	Moderate
Hoary Mountain Mint (<i>Pycnanthemum incanum</i>)	1-2% mix	3'	July to Sept	M, P, C	Shade	White	Low
Heath Aster (<i>Aster pilosus</i>)	2-10% mix; 700K/lb	2-5'	Oct - Nov	M, P, C	Full Sun	Pale Purple	Low
Joe-Pye Weed (<i>Eupatorium fistulosum</i>)	2-10% mix; 1.4M/lb	7'	July – Sept	M, P, C	Full – Part Sun	Pink-Purple	Moderate
Milkweed (<i>Asclepias syriaca</i>)	5-15% mix; 70K/lb	4'	June – Aug	M, P, C	Full Sun	Purple	Low
Mistflower (<i>Eupatorium coelestinum</i>)	1-2% mix; 1.5M/lb	1-3'	July – Oct	M, P, C	Shade – Full Sun	Purple	Moderate

Species	Seeding Rate (% of mix; # seeds/lb) ^a	Max. Height (feet)	Bloom Period	Region ^b	Minimum Light	Flower (seed) Color	Min. Soil Moisture Requirements
Wildflowers (minimum of 9 species)							
Monkey Flower (<i>Mimulus ringens</i>)	1-5% mix; 22.9M/lb	2-4'	June – Sept	M, P, C	Full Sun	Purple- White	High
Narrow-ldd Mountain Mint (<i>Pycnanthemum tenuifolium</i>)	1-2% mix	3'	July to Sept	M, P, C	Full – Part Sun	White	Low to Moderate
Narrow-ldd Sunflower (<i>Helianthus angustifolius</i>)	2-10% mix; 500K/lb	1.5-5'	Aug – Oct	M, P, C	Full – Part Sun	Yellow	Moderate to High
New England Aster (<i>Aster novae-angliae</i>)	2-10% mix; 1.1M/lb	2-6'	July – Sept	M	Full – Part Sun	Purple	Low to Moderate
New York Ironweed (<i>Vernonia voveboracensis</i>)	1-5% mix; 300K/lb	3-7'	July – Sept	M, P, C	Full – Part Sun	Purple	High
New York Aster (<i>Aster novi-belgii</i>)	1-10% mix; 700K/lb	5'	July – Oct	C	Full – Part Sun	Violet	Moderate
Nodding Bur Marigold (<i>Bidens cernua</i>)	1-15% mix; 130K/lb	3'	July – Oct	M, P, C	Full – Part Sun	Yellow	Low to High
Ox Eye Sunflower (<i>Heliopsis helianthoides</i>)	2-10% mix; 102K/lb	4'	July – Aug	M, P, C	Full – Part Sun	Pale Yellow	Low to Moderate
Rough Goldenrod (<i>Solidago rugosa</i>)	1-5% mix; 1M/lb	1-3.5'	Aug – Oct	M, P, C	Full – Part Sun	Yellow	Moderate
Showy Goldenrod (<i>Solidago speciosa</i>)	1-5% mix; 1.3M/lb	4'	Sept – Oct	M, P, C	Full – Part sun	Yellow	Moderate
Showy Tick Trefoil (<i>Desmodium canadense</i>)	2-10% mix; 80K/lb	2-4'	July – Aug	M, P, C	Full Shade	Pink-Violet	Low
Spotted Joe-Pye Weed (<i>Eupatorium Maculatum</i>)	2-10% mix; 1/4M/lb	5'	July – Sept	M	Full Sun	Pink-Purple	High
Smooth Blue Aster (<i>Aster laevis</i>)	1-10% mix; 1M/lb	1-4'	Aug – Oct	M	Full Sun	Blue-Violet	Low
Sneezeweed (<i>Helenium autumnale</i>)	1-5% mix; 1.5M/lb	5'	Aug – Sept	M, P, C	Shade – Full Sun	Yellow	Moderate
Swamp Milkweed (<i>Asclepias incarnate</i>)	5-15% mix; 70K/lb	6'	June – Aug	M, P, C	Full – Part Sun	Pale purple	High
Tall Coreopsis (<i>Coreopsis tripteris</i>)	1-5% mix; 200K/lb	3'	July – Sept	M, P, C	Full – Part Sun	Yellow	Moderate
Ten-petaled Sunflower (<i>Helianthus decapetalus</i>)	1-5% mix	5'	Aug – Oct	M, P, C	Full – Part Sun	Yellow	Moderate
Tickseed (<i>Coreopsis tinctoria</i>)	3-15% mix; 3.2M/lb	3'	July – Sept	M, P, C	Full – Part Sun	Yellow	Low
Virginia Mountainmint (<i>Pycnanthemum virginianum</i>)	1-2% mix; 3.8M/lb	1-3'	July – Sept	M, P, C	Full Sun	White	Low
White Tuttlehead (<i>Chelone glabra</i>)	1% mix; 1,472K/lb	2-7'	July – Sept	M, P, C	Full – Part Shade	White	High
Wild Bergamot (<i>Monarda fistulosa</i>)	1-5% mix; 1.2M/lb	2-4'	June – Aug	M, P, C	Full – Part Sun	Lavender	Low to Moderate
Wild Blue Indigo (<i>Baptisia australis</i>)	1-5% mix	3-5'	May – Aug	M, P	Full – Part Sun	Blue	Low
Wild Blue Lupine (<i>Lupinus perennis</i>)	5-20% mix; 19L/lb	1-3'	May – June	M, P, C	Full – Part Sun	Pink-blue	Low
Wild Columbine (<i>Aquilegia Canadensis</i>)	1-5%; 504K/lb	2'	April – June	M, P, C	Full – Part Shade	Red-yellow	Low to Moderate
Bush Clover (<i>Lespedeza capitata</i>)	1-5% mix; 144K/lb	2-4'	Aug – Sept	M, P, C	Full Sun	Yellow	Low
Partridge Pea (<i>Chamaecrista fasciculata</i>)	2-20% mix; 65K/lb	3'	July – Sept	M, P, C	Full Sun	Yellow	Low to Moderate

^a K – 1,000; M – Million

^b M – Mountain, P – Piedmont, C – Coastal Plain

Table 2. This table contains several options for controlling competing, non-desirable vegetation during plant establishment. If two burn downs are planned, records should indicate that the herbicide was applied to the field twice. Eastern Gama grass and some forbs/wildflowers may not be compatible with imazameth containing products (check label for compatibility). All herbicides shall be applied and used according to label recommendations and may slightly differ from that listed below.

Option	Current Condition	Timing	Method
1 Single Burn Down	Grassland Or Cropland	Spring	<p>(This option should not be used when tall Fescue or Orchardgrass is the predominant cover. Two herbicide burndowns are required when Fescue is the predominant cover.)</p> <ol style="list-style-type: none"> 1. Remove excess vegetation in fall or winter. 2. Apply tank mixture after vegetation has grown 4 to 6 inches. <u>Tank Mixture: per acre in April – June</u> Apply 1.5 quarts glyphosate base product. May be tanked mixed with a glyphosate/imazameth mixture at a rate of 10.7 oz/acre. <p>If imazameth alone is available, it can be applied instead of the glyphosate/imazameth mixture at a rate of 4-8 oz per acre. Follow all label instructions.</p>
2 Two Burn Downs	Grassland	Fall And Spring	<ol style="list-style-type: none"> 1. Remove excess vegetation in late summer (Aug./Sept.). 2. Apply tank mixture after vegetation has actively grown to 4 to 6 inches. <u>Tank Mixture: per acre in Sept./Oct.</u> 1 to 2 quarts glyphosate based product. Follow all label instructions. <p>AND</p> <ol style="list-style-type: none"> 3. Apply tank mixture just prior to planting and after remaining vegetation grows 4 to 6 inches. <u>Tank Mixture: per acre in April-June</u> Apply 1.5 quarts glyphosate based product. May be tank mixed with glyphosate/imazameth mixture at a rate of 10.7 oz/acre. If imazameth alone is available, it can be applied instead of the glyphosate/imazameth mixture at a rate of 4-8 oz per acre. Follow all label instructions.
3 Two Burn Downs	Grassland	Spring And Spring	<ol style="list-style-type: none"> 1. Remove excess vegetation in fall or winter 2. Apply tank mixture after vegetation has actively grown 4 to 6 inches. <u>Tank mixture: per acre in April</u> 1 to 2 quarts glyphosate based product. <p>IF green-up occurs two to four weeks after initial spraying:</p> <ol style="list-style-type: none"> 3. Apply tank mixture just prior to planting and after remaining vegetation grows at least 4 to 6 inches. <u>Tank mixture: per acre in April-June</u> Apply 1.5 quarts glyphosate based product. May be tank mixed with glyphosate/imazameth mixture at a rate of 10.7 oz/acre. If imazameth alone is available, it can be applied instead of the glyphosate/imazameth mixture at a rate of 4-8 oz per acre. Follow all label instructions.

*NRCS does not require specific herbicides by trade name and recommendations on herbicides and specifications on rate and timing should come from an extension agent.